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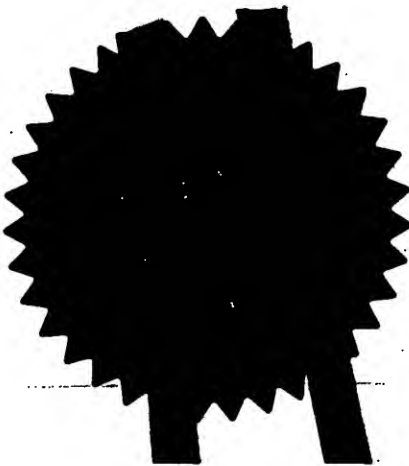
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The Patent Office

Cardiff Road  
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**1. Your reference**

BQ/PM/P/12468.GB

**2. Patent application number**

(The Patent Office will fill in this part)

**9916953.4**

**20 JUL 1999**

**3. Full name, address and postcode of the or of each applicant (underline all surnames)**

JOHN JONES  
16 HIGH MEADOWS,  
ROMILEY,  
STOCKPORT.  
SK6 4PT.

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

UNITED KINGDOM

7704380001

*[Signature]*

**4. Title of the invention**

WEB SITE SEARCHING

**5. Name of your agent (if you have one)**

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

WILSON GUNN M'CAW  
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Patents ADP number (if you know it)

7153927001

**6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number**

Country

Priority application number  
(if you know it)

Date of filing  
(day / month / year)

**7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application**

Number of earlier application

Date of filing  
(day / month / year)

**8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:**

- a) any applicant named in part 3 is not an inventor, or
  - b) there is an inventor who is not named as an applicant, or
  - c) any named applicant is a corporate body.
- See note (d))

**YES**

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Continuation sheets of this form

Description

Claim(s)

Abstract

Drawing(s)

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10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77)

Request for preliminary examination and search (Patents Form 9/77)

Request for substantive examination (Patents Form 10/77)

Any other documents (please specify)

11.

I/We request the grant of a patent on the basis of this application.

Signature

*Wilson G. M'Can*

Date

19/07/99

12. Name and daytime telephone number of person to contact in the United Kingdom

Mr. B. Quest  
0161-827-9400

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WEB SITE SEARCHING

This invention relates to a technique of facilitating contact between users and web sites on the 'World Wide Web' (WWW) of the Internet.

5 The WWW is widely used for supplying information to users concerning products and services. A particular problem arises in this respect in that suppliers wish to target potentially interested users but users generally wish to maintain their privacy.

10 The design of the WWW is such that it puts the authority and power for finding information into the user's hands. It is in effect a 'pull' approach to information research. Users pull to themselves the data they seek, when they are ready to seek it.

15 Traditional marketing relies upon 'push' techniques: messages are 'pushed' in front of targeted persons. However, users are generally cautious about revealing their identities on the WWW and, equally, are generally averse to receiving unsolicited contacts through this medium.

Accordingly, suppliers experience difficulty in achieving adequate promotion of their goods and services through the WWW, and users often experience frustration in trying to find relevant suppliers.

20 An object of the present invention is to provide a technique to facilitate contact between suppliers and targeted users on the WWW without compromising the privacy of the users.

According to the invention therefore there is provided a method of

facilitating contact between suppliers web sites and users on the WWW wherein the users have personal profiles, the web sites have corresponding codes and matching means is provided to identify web sites having codes of a predetermined matching nature relative to users' profiles.

5           With this arrangement targeted contact can be achieved on the basis of matched codes and profiles and, in so far as the profiles need not be such as to provide precise personal identification, and also need not be centrally stored or listed, the privacy of users need not be compromised.

10           The technique of the invention can enable the owners of commercial web sites to implement a desired 'pull' marketing strategy adapted to the special environment of the WWW. There is the possibility of providing highly targeted routing of individuals to web site information which has personal relevance to them. There is also the possibility of tailoring information to the requirements of users whereby for example a message  
15 or offer can be adjusted for different users dependent on their profiles.

          These benefits can be achieved without requiring complete user identification or a central register of personal data whereby precise targeting of individuals can be attained without undue risk of commercial, political or social abuse.

20           The invention is particularly beneficial in the context of marketing of commercial products and services. However, the invention is not restricted to this field of application and may be used in relation to the supply of

information for other commercial or non-commercial purposes.

The user profiles can be established in any suitable manner. They may be established on a query basis, whereby the user is required to respond to a number of queries e.g. by entering text into a form, or ticking  
5 boxes or otherwise, and/or on a monitoring or feedback basis whereby activity of the user e.g. in searching for, or visiting web sites is utilised to establish or modify the profile.

The user profile may be established using software on a PC station or other personal localised equipment used to access the WWW.

10 The user profile may be in the form of a data set made up of individual data items or nuggets representing different personal attributes of the user. The data set is preferably stored in the user's personal localised WWW access equipment so that it can be retrieved automatically or under the control of the user for presentation to the matching means as  
15 and when required.

The matching means may be a server incorporating a search engine which operates to match codes of web sites on servers registered with the search engine and profiles of users submitting search requests to the search engine so as to produce a list of matched web site addresses. The search  
20 engine may be linked to an activity and/or statistical logging device whereby user access of registered coded web sites and/or profile characteristics can be monitored particularly for revenue-generating purposes.

The web site codes may be embedded in the sites on their servers so as to be detected on registration and/or may be separately submitted to the search engine as part of the registration process.

5 The invention will be described further by way of example only and with reference to the accompanying drawing which is a flow chart illustrating one embodiment of the invention.

The drawing, shows an Internet system comprising a user's localised PC station 1, a remote search engine server 2 connected to the Internet backbone 3, and a remote web site server 4. The user's station 1 has a PC  
10 5 arranged for connection to the Internet 3 in the usual way.

The PC station 1 runs software which includes a profile agent 6. This software 6 establishes a set of data 7 for the user which consists of 'nuggets' 8 of information, each nugget representing a predetermined personal attribute.

15 For example, the attributes may include level of education, nature of employment, marital and family status, age range, interests, life style, etc.

The attributes may be determined, at least in the first instance, by requiring the user to respond to queries by entering text answers into a form on the PC, by ticking boxes or otherwise.

20 The data set 7 made up of the attributes 8 determined by the responses to the queries is stored in the user's PC 5 and the software 6 operates to retrieve the data set 7 and put this on the PC's 'clipboard' or



other temporary storage ready for use as explained below. The data set 7 may be in the form of a machine generated code, for example a series of numbers each representing a different respective attribute 8 and having a value within a predetermined range indicating the nature or degree of the attribute 8.

The data set 7 may be of predetermined fixed scope and once established may be fixed in memory unless deliberately changed by the user. Alternatively the scope may be user-variable whereby for example the user may have the option of extending or reducing the different attributes, or the ranges of the attributes, which are included in the data set 7.

Also, the data set 7 may change or be completed or extended over time with repeated usage of the profile agent software 6. This repeated usage may arise on a periodic basis or may follow Internet searching, as described hereinafter, whereby the data set 7 is updated in correspondence with use of the data set 7.

The user's PC station 1 is connected to the Internet 3 and the user can interrogate the selected web search engine database 9 on the remote server 2 in the usual way. That is, the user can enter a keyword or combination of keywords to find web sites which supply information of interest to the user, such as the web site 10 on the remote server 4.

This procedure involves use of a web browser 11 on the user's PC station 1 and this is linked with the profile agent software 6.

This software linkage prompts the user to supplement his search by appending to the keywords, or entering into a specific supplementary window or box of the web browser 11, the user's profile data set 7. This is done by a usual mouse click-and-paste operation to cause the data set 7 to be copied from the PC clipboard.

The search engine 9 then carries out a search through its database and produces a URL list of web sites which match both the keywords and also the data set 7.

In the latter respect, a supplier having a web site 10 which it wishes to target at profiled users, incorporates an appropriate profile code or codes 12. The code 12 may be embedded in the web site 10 as stored on the supplier's web server 4, so that the code 12 is extracted by the search engine 9 during classification of the site 10 when the site 10 is registered with the search engine 9. Alternatively or additionally, the code 12 may be notified separately to the search engine 9 during registration.

The search engine 9 may match the web site 10 with the user's data set 7 on a complete or selective basis. Thus, the matching may require complete correspondence whereby the web site code 12 has to have all of the attributes 8, and the same values for the attributes 8, as the user's data set 7. Alternatively, partial matches, e.g. where only some of the attributes 8 match and/or attributes 8 do not match exactly but are within predetermined ranges, may be permissible. Where partial matching is

permissible, this may be predetermined by the search engine 9 and/or may be preset by the user, and the listed results may indicate the degree or nature of matching, e.g. as a percentage or by identifying the matching parameters, so that the user can decide whether or not to follow up the listed sites.

The search engine 9 can incorporate a data log 13 so that it can perform logging and counting operations whereby it is possible to track the numbers of targeted 'hits' on a web site (i.e. the number of times users have accessed web sites found using a profile search). Also statistical data can be derived by processing the attributes of the users in relation to the searches carried out or web sites visited or other factors.

Revenue can be derived by charging the web site owners in relation to logged numbers of visits derived from profile searches and/or by selling statistical information derived from logged attributes.

Whilst the user carries out profile searches, the user profile agent software 6 may monitor the searching keywords and protocols used and may utilise this to extend or amend the stored profile and/or the range or nature of queries next to be put to the user in establishing the data set 7.

A profile can be built up which can constitute an extensive and detailed personal analysis of the user, and this can help the search engine 9 in routing the user to those web sites 10 which are likely to be of most interest to the user in the context of the search request posed.

Thus, by way of example, a web site 10 offering financial services may opt to target a consumer having all or most of the attributes of a young family man with a professional job, interested in financial instruments of a certain type, who is risk averse with his assets but enjoys an active outdoor private life. Such a person would therefore be directed selectively to this site 10 (and other similar registered coded sites) on entering a request for sites supplying financial investment services. The site owner can opt to use detailed or broader codes 12 depending on the range of users who are desired to be targeted.

The user may have the option of selecting the parameters of the profile data set 7 as supplied by the user with a search request so that the user can elect to provide tighter or looser sets of data depending on whether the user wishes to achieve a precise searching goal or to browse through a looser set of data to examine a wider field. The user can also opt to reveal progressively more of the profile data during searching. The user can also at any time opt not to use the profile data.

With this arrangement, the software 6 helps the user to build up a detailed personal profile which facilitates targeted searching. In effect, personality is added to simple subject matter searches. At the same time, web sites registered as targeted sites with the search engine can be assured that the information supplied will more readily be accessed by those persons who are likely to be interested in the information. Also statistical

information of marketing value can be obtained.

Importantly, these benefits are achieved without compromising the privacy of the user.

5 The profile data set 7 is incomplete in that it does not provide precise identification of the user: it does not include sensitive data such as name and address, nor does it incorporate the IP address of the user's PC or Internet service provider. The profile data is maintained confidential on the user's own PC unless and until the user decides to present the information to the search engine and then the information is only used as stated without  
10 revealing the identity of the user.

The technique described is analogous to the technique utilised when a customer enters a shop to negotiate a purchase. The customer may progressively reveal personal information without disclosing his or her identity until a point in the transaction is reached at which the customer is  
15 happy to disclose this information.

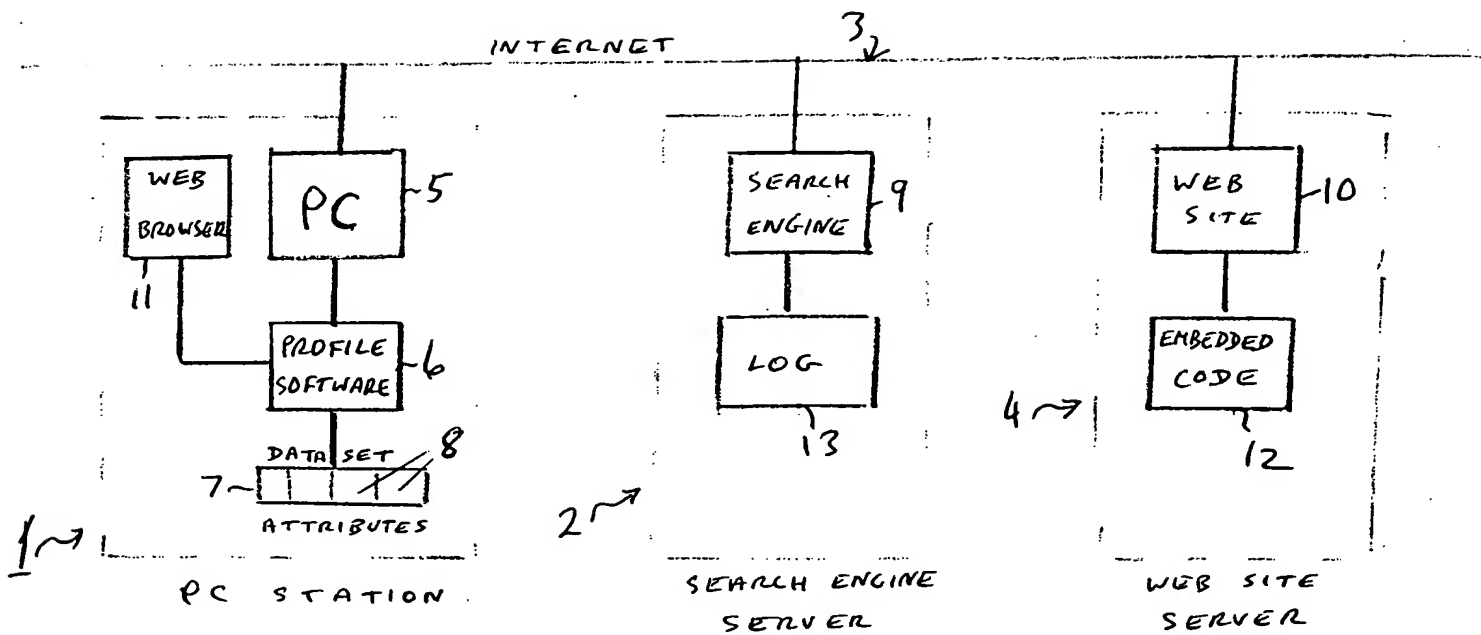
The end result is improved searching and access to information for the user, improved marketing for the information supplier, derived statistical usage information, a source of revenue obtainable from site registration, targeted visits and statistical data, and controlled privacy for the user.

20 It is of course to be understood that the invention is not intended to be restricted to the details of the above embodiment which are described by way of example only. Thus, for example, whilst reference is made to

-10-

commercial sites relating to supply of goods or services it is to be understood that the invention is not restricted to this and the technique of the invention may be used in relation to the supply of suitable information on a commercial or non-commercial basis.

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